
Maintenance and diagnostics

The Meridian 1 software provides maintenance and diagnostics for the Multifrequency Receiver (MFR). They are performed similarly to the Tone Detector (TDET) or Digitone Receiver (DTR).

Maintenance and diagnostics are provided by the Meridian 1 software as Service Change programs that can be run either automatically upon Meridian 1 CPU request or manually.

Maintenance and diagnostics involve the following:

- enabling/disabling an MFR to allow card installation and removal
- self-testing the MFR card
- testing all tones with the help of an MFS loop
- signaling testing

LD 34—Tone and digital switch

The maintenance of MFRs is integrated into LD 34 (maintenance of DTR, TDET).

An MFR test command is introduced with X11 release 17.

The commands in **Table 17** apply to MFRs.

Table 17
MFR commands

ENLR	LSC (U)	Enable the specified DTR/MFR card/unit	Note 1
DISR	LSC (U)	Disable the specified DTR/MFR card/unit	Note 1
SDTR	LSC (U)	Display the status of the specified DTR/MFR	Note 1
SDTR		List all the disabled DTR/MFR units	Note 1
STAT		List all the disabled DTR/MFR units (duplicate of SDTR with no parameters)	Note 1
MFR	LSC (U)	Test the specified MFR card/unit	Note 2
MFR	L	Test all the specified MFR units on loop L.	Note 2
MFR	<CR>	Test all MFR units	Note 2
Note 1: The existing command (for DTR) is used for both DTR and MFR. Note 2: Faulty MFR cards are disabled and an MFRxxx error message is output. Only 50% of all MFR cards in the system may be disabled at one time. If the failure occurred during the midnight routine, a minor alarm is initiated.			

Command Description

The following commands are used for maintaining the MFR. They perform enabling and disabling functions, perform tests, and print the current status.

- **ENLR n**—enable MFR “n”
- **DISR n**—disable MFR “n”
- **SDTR n**—print MFR “n” status
- **MFR n**—test MFR “n”

The following commands are used for printing disabled MFR units.

- **STAT**—print disabled MFR units
- **SDTR**—print disabled MFR units

The ENLR, DISR, STAT and SDTR commands are used for both DTRs and MFRs. The Meridian 1 software can distinguish between the two types of receiver, where necessary.

Disabling an MFR (DISR command) that is at present active in a call, disconnects the call. No error messages are given (as for TDET and DTR).

The MFR command performs the following tests:

- response test
- self-test (internal test of the card by its processor)
- valid reception test of all MF tones:

An MFS is connected to the MFR through a network timeslot. The MFS is triggered to send MF tones to the MFR, and the correct reception is checked.

If the MFR is busy, no test is performed (as for TDET and DTR), and the TDS315 message is printed.

During midnight routines, the MFR command is performed.

The following are additional comments on the above section:

- For commands ENLR and DISR: “n” can only be LSC or LSCU
- For command STAT: no other parameters can be given
- For command SDTR: if “n” is specified, it can only be LSC or LSCU. If “n” is not specified, all disabled MFR units are printed.
- For command MFR: “n” can be one of LSC, LSCU, L or <CR> (which causes a test to be performed on all MFRs).

LD 30—Network and signaling diagnostics

- Signaling test of MFRs is supported by this overlay.
- Signaling test of FGDT trunks is supported. The test is performed for all trunks. For example, if all units of the FGDT trunk card are idle, an “existence” message is sent to the card. It is then required to return the same message to the CPU.

Testing FGDT trunks and MFRs during midnight routines is supported.

LD 32—Network peripheral equipment diagnostics

Standard enable, disable, and status commands are supported for MFRs. For FGDT trunks, all applicable trunk commands are supported.

Changes are made for this program to include the following responses where applicable (for example, status of specific card).

Normal responses include

MFR (Multi-frequency receiver)

Mnemonics for trunk types include

FGDT (Feature Group D trunk)